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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/800,909	03/15/2004	William Sears	31132.240	1487

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HAYNES AND BOONE, LLP
901 MAIN ST
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DALLAS, TX 75202

EXAMINER

SCHILLINGER, ANN M

ART UNIT	PAPER NUMBER
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3738

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/03/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/800,909

Applicant(s)

SEARS ET AL.

Examiner

Ann Schillinger

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 May 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
- Paper No(s)/Mail Date 3/15/04, 9/28/05.

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 4-8, 10, 12, 15, 16, 19, 20, and 26 are rejected under 35 U.S.C. 102(e) as being anticipated by Gau (U.S. Pub. No. 2002/0156528). Gau discloses the following of claim 1: a motion-preserving implant device comprising: a first plate (10) for engaging with a first bone a second plate (11) for engaging with a second bone an articulation member (center elements 8) positioned between the two plates; and a motion-controlling member (outer elements 8, 12, 13) attached to one or both of the plates (Figures 15, 17).

Gau discloses the following of claim 2: the device of claim 1 wherein the motion-controlling member is configured to constrain the relative motion between the two plates (paragraph 0065).

Gau discloses the following of claim 4: the device of claim 1 wherein the motion-controlling member includes a plurality of elastic members (paragraph 0062).

Gau discloses the following of claim 5: a spinal implant for insertion between two vertebral bodies, comprising: a first plate (10) for engaging with the first vertebral body a second plate (11) for engaging with the second vertebral body an articulation member (center elements

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8) positioned between the two plates; and an elastic motion-controlling member (outer elements 8, 12, 13) positioned between the plates (Figures 15, 17).

Gau discloses the limitations of claims 6 and 7 in paragraph 0066.

Gau discloses the following of claim 10: the spinal implant of claim 5 wherein the articulation member includes a projection having a convex shape (8).

Gau discloses the following of claim 12: the spinal implant of claim 5 wherein the motion-controlling member includes a plurality of elastic components (paragraph 0062).

Gau discloses the limitations of claims 15 and 16 because the environment and the external stimulus of the spinal column will cause the element 80 to change its shape accordingly as the patient is moving. The examiner is interpreting the implant's shape to constitute a property.

Gau discloses the following of claim 19: the spinal implant of claim 12 wherein at least one of the elastic members is shaped as a wheel (8).

Gau discloses the following of claim 20: the spinal implant of claim 12 wherein at least one of the elastic members is shaped as a sphere (8).

Gau discloses the following of claim 26: the spinal implant of claim 5 wherein at least one of the plates includes a recess for receiving the motion-controlling member (figure 16 shows that the elements 8 must have recesses that they are going through).

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The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-8, 10, 12-17, 19, 21, and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Xavier et al. (U.S. Pat. No. 6,063,121). Xavier et al. discloses the following of claim 1: a motion-preserving implant device comprising: a first plate (20) for engaging with a first bone a second plate (48) for engaging with a second bone an articulation member (46, 62, 68) positioned between the two plates; and a motion-controlling member (80) attached to one or both of the plates.

Xavier et al. discloses the following of claim 2: the device of claim 1 wherein the motion-controlling member is configured to constrain the relative motion between the two plates (col. 4, lines 13-17).

Xavier et al. discloses the following of claim 3: the device of claim 1 wherein the motion-controlling member is configured to provide a bumper between the two plates when a motion of the two plates meets a predetermined threshold (col. 4, lines 3-7; col. 4, lines 13-17).

Xavier et al. discloses the following of claim 4: the device of claim 1 wherein the motion-controlling member includes a plurality of elastic members (col. 4, lines 11-13).

Xavier et al. discloses the following of claim 5: a spinal implant for insertion between two vertebral bodies, comprising: a first plate (20) for engaging with the first vertebral body a second plate (48) for engaging with the second vertebral body an articulation member (46, 62,

68) positioned between the two plates; and an elastic motion-controlling member (80, 94) positioned between the plates (Figures 2, 3).

Xavier et al. discloses the limitations of claims 6 and 7 in col. 4, lines 1-7.

Xavier et al. discloses the following of claim 8: the spinal implant of claim 5 wherein the articulation member is a non-elastic ball and socket (col. 4, lines 56-57).

Xavier et al. discloses the following of claim 10: the spinal implant of claim 5 wherein the articulation member includes a projection having a convex shape (46).

Xavier et al. discloses the following of claim 12: the spinal implant of claim 5 wherein the motion-controlling member includes a plurality of elastic components (col. 4, lines 11-13).

Xavier et al. discloses the following of claim 13: the spinal implant of claim 12 wherein the motion-controlling member includes a cord (94) connected between the plurality of elastic components (80). The examiner is interpreting the term "between" to mean "immediate to."

Xavier et al. discloses the following of claim 14: the spinal implant of claim 12 wherein at least one of the elastic members is constructed of a bio-resorbable material (col. 4, line 12, as silicon is a bio-resorbable material).

Xavier et al. discloses the limitations of claims 15 and 16 because the environment and the external stimulus of the spinal column will cause the element 80 to change its shape accordingly as the patient is moving. The examiner is interpreting the implant's shape to constitute a property.

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Xavier et al. discloses the following of claim 17: the spinal implant of claim 12 wherein at least one of the elastic members includes a hollow portion (90).

Xavier et al. discloses the following of claim 19: the spinal implant of claim 12 wherein at least one of the elastic members is shaped as a wheel (80).

Xavier et al. discloses the limitations of claim 21 because when the plates are un-tilted in a neutral position, the motion-controlling member does not exert any force on the plates, but when the plates are shifted to the degrees disclosed above, the motion-controlling member will restrain against the plates moving too much.

Xavier et al. discloses the following of claim 25: the spinal implant of claim 12 wherein at least one of the elastic members is attached to a plates via an attachment mechanism (106, 108, 114).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gau or Xavier et al. in view of Berry (U.S. Pat. No. 5,895,428). Gau and Xavier et al. do not disclose using an amorphous oxide coating on the implant's plates to decrease the frictional wear on the implant over time. Berry teaches this in col. 10, lines 56-57. Therefore, it would have been obvious to

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one of ordinary skill in the art at the time the invention was made, to use this type of coating to prevent the implant from being damaged by friction.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gau or Xavier et al. in view of Mathys, Jr. et al. (U.S. Pub. No. 2004/0082999). Gau and Xavier et al. do not disclose using UHMWP on the motion-controlling members, because UHMWP is a strong, yet flexible material that would withstand the wear and tear associated with the movement of the spine, but also will allow the bending motions needed for the spine. Mathys Jr. et al. teaches this in paragraph 0006. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to use this type of coating to get the material properties that are necessary for the motion-controlling member of the implant.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gau or Xavier et al. in view of Ray et al. (U.S. Pat. No. 4,772,287). Gau and Xavier et al. do not disclose using gel in the elastic members of their implants because gel has inherent properties that mimic the natural movement of intradiscal nuclear tissue. Ray et al. teaches this in col. 3, lines 15-17. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to use gel in the elastic members of the implant because their viscosity and velocity-shear behavior matches that of the intradiscal nuclear tissue.

Claims 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gau or Xavier et al. in view of Gauchet et al. (U.S. Pat. No. 6,579,320). Gau and Xavier et al. do not disclose using recesses to better secure the elastic members to the implant plates. Gauchet et al. teaches such a technique in col. 4, lines 5-10, and as shown in Figure 1, where the spaces between elements 10 (that are located on both the upper and lower plates) can receive the elastic

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element 16. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to potentially use recesses to better secure the implant's elastic members in place.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ann Schillinger whose telephone number is (571) 272-6652. The examiner can normally be reached on Mon. thru Fri. 9 a.m. to 4 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Corrine McDermott can be reached on (571) 272-4754. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ann Schillinger
December 20, 2006


ALVIN J. STEWART
PRIMARY EXAMINER